# UI Bulletin #171c

**Subject:** Removal/Deletion – Front/Side Fuel Tank

**Models Years Affected:** 2020 - 2023

**Models Affected:** Chevrolet Silverado/GMC Sierra 3500 HD Chassis Cabs with Diesel Engine (option L5P)

**Origination Date:** September 9, 2020

**Revision Date:** May 25, 2023

# ADVISORY:

## Condition/Concern:

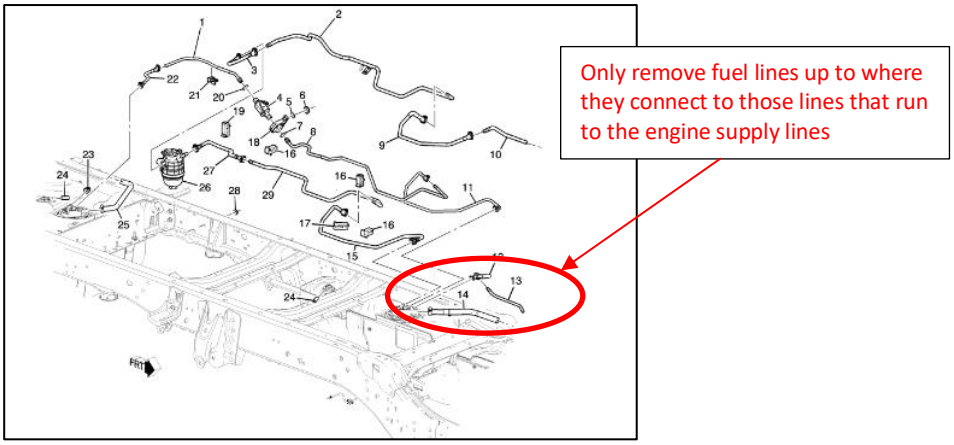
Some vehicle upfits of the Chevrolet Silverado and GMC Sierra 3500HD Chassis Cabs required the removal/deletion of the forward fuel tank to allow the relocation of the Diesel Exhaust Fluid (DEF) storage tank to allow for the installation upfit equipment. The following will provide instructions on the removal/addition of the necessary hardware to reconfigure the vehicle's fuel system from a dual (N2N) to a rear mounted (N2L) fuel tank system. Be advised that following the fuel system reconfiguration certain modules on the vehicle must be reprogram for the fuel system components to function properly.

NOTICE: READ THIS BULLETIN COMPLETELY IN ITS BEFORE BEGINNING THE RECONFIGURATION

## Repair/Recommendation:

**It is recommended to have all required parts on hand prior starting to perform the reconfiguration**

1. Drain the fuel tank. (linked document)
2. Remove the Fuel Tank(linked document)
3. Remove fuel Lines – use care when removing as some lines are reused.



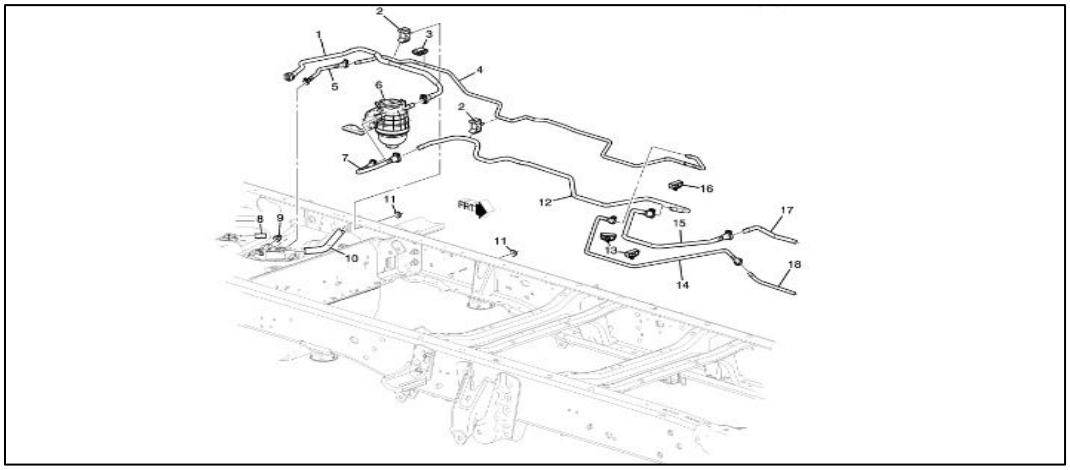

Replace Rear tank Fuel Pump Module(linked Document)



**Disclaimer:** GM Upfitter Integration Technical Bulletins are intended for use by professional technicians, NOT a "do-it-yourselfer". They are written to inform these technicians of conditions that may occur on some vehicles, or to provide information that could assist in the proper service and/or modification of a vehicle. These properly trained technicians have the equipment, tools, safety instructions, and know-how to do a job properly and safely. If a condition is described, DO NOT assume that the bulletin applies to your vehicle, or that your vehicle will have that condition. Contact GM Upfitter Integration for information on whether the information is applicable your vehicle.

## Fuel Supply Line Reconfiguration

The fuel lines must be reconfigured from duel tank (above) to single rear (below).



| Item | Part # | QTY. | Description<br>Specific part usage for 310xx (60" CA) 314xx (84" CA) Common Usage for Both models/Cas REUSED |
|---|---|---|---|
| 1 | 84733587 or 84987664 | 1 | HOSE, FUEL/WAT SEP INL (Service Lane Part) |
| 2 | 15035903 | 2 | CLIP, FUEL FEED & RTN PIPE (NYLON, HOLDS TWO PIPES 12.7/9.5, WIDTH 22, LENGTH 58 W/M8 STUD) (Service Lane Part) |
| 3 | 22737791 | 1 | CLIP, FUEL FEED & RTN RR HOSE (HOLDS TWO PIPES 12.6/9.5, WIDTH 21, LENGTH 52) (Service Lane Part) |
| 4 | 84968911 | 1 | PIPE, FUEL RTN RR (AC-Delco #84631070) (Service Lane Part) 310xx (60" CA |
| 4 | 84968912 | 1 | PIPE, FUEL RTN RR (AC-Delco #84631059) (Service Lane Part) 314xx (84" CA) |
| 5 | 84987666* | 1 | HOSE, FUEL FLTR (Service Lane Part) *replaces P/N 84631060 |
| 6 | | NR | FILTER, FUEL (W/ WAT SEP) (SEE GROUP 03 "FUEL FILTER & MOUNTING" FOR DETAILED ILLUSTRATED VIEW) |
| 7 | 84983053 | 1 | HOSE, FUEL FLTR (Service Lane Part) |
| 8 | 22883445 | NR | CAP, F/TNK FIL VENT PIPE (AC-Delco #22883445) (Service Lane Part) |
| 9 | 23287870 | NR | PLUG, F/PMP PORT (AC-Delco #23287870) (Service Lane Part) |
| 10 | | NR | HOSE, F/TNK FIL VENT (SEE GROUP 03 "FUEL TANK FILLER PIPES & HOSES" FOR DETAILED ILLUSTRATED VIEW) |
| 11 | 11546459 | NR | NUT, FUEL FEED & RTN RR PIPE CLIP (M8X1.25 OD 24,10THK) (8.915) (Service Lane Part) |
| 12 | 84733594 | 1 | PIPE, FUEL FEED RR (AC-Delco #84733594) (Service Lane Part) 310xx (60" CA |
| 12 | 84733593 | 1 | PIPE, FUEL FEED RR (AC-Delco #84733593) (Service Lane Part) 314xx (84" CA) |
| 13 | 25792015 | 3 | CLIP, FUEL FEED & RTN PIPE (FOR 905 & 1206 PIPES, 50MM LNG, 15MM WIDTH; W/PSH RTNR) (Service Lane Part) |
| 14 | 84987661 | 1 | HOSE, FUEL RTN (AC-Delco #84631064) (Service Lane Part) |
| 15 | 23303485 or 84987662 | 1 | HOSE, FUEL FEED (INCLS CONNECTOR) (AC-Delco #84733586) (Service Lane Part) |
| 16 | 25792013 | 1 | CLIP, FUEL FEED & RTN PIPE (HOLDS 2 LINES W/XMAS-TREE STYLE RETAINER) (Service Lane Part) |

## Additional Required Parts



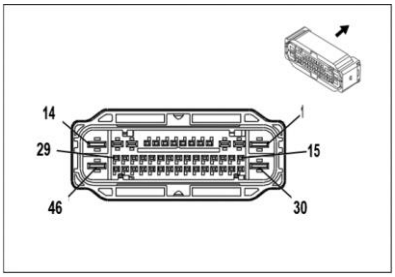
**Disclaimer:** GM Upfitter Integration Technical Bulletins are intended for use by professional technicians, NOT a "do-it-yourselfer". They are written to inform these technicians of conditions that may occur on some vehicles, or to provide information that could assist in the proper service and/or modification of a vehicle. These properly trained technicians have the equipment, tools, safety instructions, and know-how to do a job properly and safely. If a condition is described, DO NOT assume that the bulletin applies to your vehicle, or that your vehicle will have that condition. Contact GM Upfitter Integration for information on whether the information is applicable your vehicle.

# UI Bulletin #171c

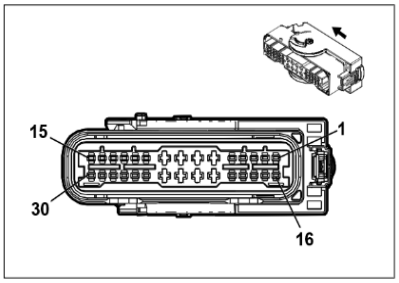
| Component | Component P/N | Qty Req. |
|---|---|---|
| Fuel Pump Driver Control Module (FPZM) | 13531869 | 1 |
| Fuel Tank Pump Module | 84777095 | 1 |
| Service Connector - Fuel Pump control Module | 19354086 | 1 |
| Terminated Lead - Terminal Type I | 19300440 | 6 |
| Terminated Lead - Terminal Type II | 19329958 | 15 |

Replace Fuel Pump Zone Module (FPZM)(linked document)

Once the module has been replaced you will note the connector does not fit in the new module. You will need to transfer wires from the 46 cavity connector to the new 30 cavity connector you should have ordered for the P/N listed above.




from….to

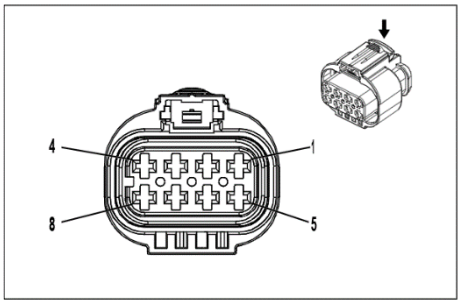



NOTE: Not all wires will be transferred from 46 cavity into the NEW 30 cavity connector and not all cavities in the 30 cavity connector will utilized. For easier reconfiguration, remove the jumper harness from the chassis harness to the Fuel pump module. Once the 46 to 30 cavity conversion is complete it is suggested that the unused wires be removed from the chassis connector of the jumper harness

| Dual Tank Configuration (N2N) | | | | | | Single Tank Configuration - Rear Only (N2L) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Function | Color | Size | Circuit | Pin | From/To | Pin | Circuit | Size | Color | Function |
| Fuel Pump Control | GY | 2.5 | 120 | 2 | ----------> | 8 | 120 | 2.5 | GY | Fuel Pump Control |
| Fuel Filter Temperature Sensor Low Reference | BK/VT | 0.5 | 412 | 24 | ----------> | 19 | 412 | 0.5 | BK/VT | Fuel Filter Temperature Sensor Low Reference |
| Run/Crank Ignition 1 Voltage 4 | VT/GN | 0.5 | 439 | 3 | ----------> | 17 | 439 | 0.5 | VT/GN | Run/Crank Ignition 1 Voltage 4 |
| Fuel Filter Temperature Signal | BN/VT | 0.5 | 455 | 36 | ----------> | 4 | 455 | 0.5 | BN/VT | Fuel Filter Temperature Signal |
| Fuel Pump Primary Relay Control | GN/GY | 0.5 | 465 | 11 | ----------> | 18 | 465 | 0.5 | GN/GY | Fuel Pump Primary Relay Control |
| Primary Fuel Level Sensor Signal 2 | BU/VT | 0.8 | 1589 | 37 | ----------> | 13 | 1589 | 0.5 | BU/VT | Primary Fuel Level Sensor Signal 2 |
| Ground 17 | BK | 2.5 | 1750 | 14 | ----------> | 22 | 1750 | 2.5 | BK | Ground 17 |
| Fuel Pump Supply Voltage Phase 2 | YE/GY | 2.5 | 4137 | 30 | ----------> | 9 | 4137 | 2.5 | YE/GY | Fuel Pump Supply Voltage Phase 2 |
| Fuel Pump Supply Voltage Phase 3 | WH/BN | 2.5 | 4138 | 1 | ----------> | 24 | 4138 | 2.5 | WH/BN | Fuel Pump Supply Voltage Phase 3 |
| Powertrain Sensor Bus Enable | VT/GN | 0.5 | 4320 | 10 | ----------> | 16 | 4320 | 0.5 | VT/GN | Selective Catalytic Reduction Power Module Wake-Up Signal |
| High Speed GMLAN Serial Data [+] 7 | BU/BN | 0.5 | 4498 | 7 | ----------> | 30 | 4498 | 0.5 | BU/BN | High Speed GMLAN Serial Data [+] 7 |
| High Speed GMLAN Serial Data [-] 7 | WH | 0.5 | 4499 | 8 | ----------> | 15 | 4499 | 0.5 | WH | High Speed GMLAN Serial Data [-] 7 |
| Secondary Fused Battery Positive Voltage 53 | RD/VT | 2.5 | 5340 | 46 | ----------> | 7 | 5340 | 2.5 | RD/VT | Secondary Fused Battery Positive Voltage 53 |
| Fuel Level Sensor Low Reference | BK/GN | 0.5 | 6281 | 21 | ----------> | 28 | 6281 | 0.5 | BK/GN | Fuel Level Sensor Low Reference |
| Water In Fuel Sensor Signal | BU/YE | 0.5 | 6861 | 16 | ----------> | 2 | 6861 | 0.5 | BU/YE | Water In Fuel Sensor Signal |
| Water In Fuel Sensor Voltage Reference | WH/RD | 0.5 | 6862 | 4 | ----------> | 1 | 6862 | 0.5 | WH/RD | Water In Fuel Sensor Voltage Reference |
| Water In Fuel Sensor Low Reference | BK/BU | 0.5 | 6863 | 23 | ----------> | 3 | 6863 | 0.5 | BK/BU | Water In Fuel Sensor Low Reference |
| Fuel Pump Assembly Shield Ground | BN | 0.8 | 7444 | 15 | ----------> | 23 | 7444 | 0.5 | BN | Fuel Pump Assembly Shield Ground |
| Fuel Pressure Sensor 5V Reference | BN/RD | 0.5 | 7445 | 19 | ----------> | 12 | 7445 | 0.5 | BN/RD | Fuel Pressure Sensor 5V Reference |
| Fuel Pressure Sensor Signal | BU/WH | 0.8 | 7446 | 20 | ----------> | 26 | 7446 | 0.5 | BU/WH | Fuel Pressure Sensor Signal |
| Fuel Pressure Sensor Low Reference | BK/YE | 0.5 | 7447 | 35 | ----------> | 27 | 7447 | 0.5 | BK/YE | Fuel Pressure Sensor Low Reference |
| These circuit need to re-routed to the new fuel pump module in the rear tank. | | | | | | | | | | |

**Disclaimer:** GM Upfitter Integration Technical Bulletins are intended for use by professional technicians, NOT a "do-it-yourselfer". They are written to inform these technicians of conditions that may occur on some vehicles, or to provide information that could assist in the proper service and/or modification of a vehicle. These properly trained technicians have the equipment, tools, safety instructions, and know-how to do a job properly and safely. If a condition is described, DO NOT assume that the bulletin applies to your vehicle, or that your vehicle will have that condition. Contact GM Upfitter Integration for information on whether the information is applicable your vehicle.

Relocate/Reroute Primary Fuel Pump (FP) wires from the front fuel tank to the now primary rear fuel tank. Having previous replaced the Fuel Pump (FP) Module in the rear tank you should note that the new pump has an 8 cavity connector versus the previous 2 cavity connector from the removed pump. This 8 cavity connector had previous been plugged into the front tank and now must be plugged into the rear tank…the 2 cavity FP connector previously connected to the rear tank FP is no longer used.




**A6C Fuel Pump and Level Sensor Assembly - Primary (L5P+N2L)**

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 2.5 | GY | 120 | Fuel Pump Control | I | – |
| 2 | 2.5 | YE/GY | 4137 | Fuel Pump Supply Voltage Phase 2 | I | – |
| 3 | 2.5 | WH/BN | 4138 | Fuel Pump Supply Voltage Phase 3 | I | – |
| 4 | 0.5 | BN | 7444 | Fuel Pump Assembly Shield Ground | I | – |
| 5 | 0.5 | BU/VT | 1589 | Primary Fuel Level Sensor Signal 2 | I | – |
| 6 | 0.5 | BK/GN | 6281 | Fuel Level Sensor Low Reference | I | – |
| 7 - 8 | – | – | – | Not Occupied | – | – |

Prime the Fuel System (linked document)

## Additional Information:

Upon completion of the fuel system hardware reconfiguration, it is necessary to reprogram the vehicle's **Engine Control Module (ECM)** by a GM dealer to enable proper fuel system operation and IP Cluster fuel level indication.

**GM DEALERS:**

Contact Techline Customer Support Center (TCSC) and request the vehicle configuration string be modified, replacing the dual fuel tank option (N2N) with the rear only fuel tank option (N2L).

- **NOTE:** TCSC charges the dealer an adminstrative fee (~$100 +/- $25) for modifying the configuration string, this fee is typically passed onto the customer.
- Be sure to check for and clear any DTCs that may be present following the vehicle reconfiguration. Verify proper operation fuel level gauge/indication.



**Disclaimer:** GM Upfitter Integration Technical Bulletins are intended for use by professional technicians, NOT a "do-it-yourselfer". They are written to inform these technicians of conditions that may occur on some vehicles, or to provide information that could assist in the proper service and/or modification of a vehicle. These properly trained technicians have the equipment, tools, safety instructions, and know-how to do a job properly and safely. If a condition is described, DO NOT assume that the bulletin applies to your vehicle, or that your vehicle will have that condition. Contact GM Upfitter Integration for information on whether the information is applicable your vehicle.